

CLAIMS

1. A mortar and debris collection device comprising first and second substantially rigid mat elements connected by a flexible hinge formation that permits the mat elements to be folded into closely overlying relationship for insertion in a hinge-formation-down orientation into lower portions of a cavity between an outer wall structure and an inner wall structure of a masonry cavity wall where the device unfolds to form an upwardly opening generally V-shaped trough for catching mortar droppings and construction debris at locations spaced from where weep vent passages formed through the outer wall structure open into lowermost portions of the cavity, and wherein the mat elements are pervious to moisture and permit moisture to pass downwardly through lower cavity portions toward where the weep vent passages open into the cavity for discharge from the cavity through the weep vent passages.

2. The device of Claim 1 wherein at least one of the mat elements is defined by an open-space defining array of polymer filaments that twist and turn between filament intersections where adjacent ones of the filaments are bonded to each other.

3. The device of Claim 1 wherein each of the first and second mat elements has an open-space defining array of polymer filaments that twist and turn between filament intersections where adjacent ones of the filaments are bonded to each other.

4. The device of Claim 1 wherein the flexible hinge formation extends along common lengths of the first and second mat elements to provide a hinged connection

therebetween, and wherein when the mat elements are folded into closely overlying relationship, the thickness of the folded mat elements is less than eighty percent of the width of the cavity into which the device is to be inserted.

5. The device of Claim 1 wherein the first mat element has a first width, wherein the second mat element has a second width, and the first and second widths are unequal.

6. The device of Claim 5 wherein one of the first and second widths is substantially twice that of the other of the first and second widths.

7. The device of Claim 1 wherein the first mat element has a first width, wherein the second mat element has a second width, and the first and second widths are substantially equal.

8. The device of Claim 1 wherein a selected one of the first and second mat elements has a width sufficient to shield a reach of flashing material that lines a lower portion of the inner wall structure, and the selected one of the first and second mat elements is positioned in the cavity so as to shield said reach of flashing material.

9. The device of Claim 1 wherein the hinge formation extends substantially continuously along side-by-side extending lengths of the first and second mat elements.

10. The device of Claim 1 wherein the hinge formation extends along spaced portions of the lengths of the first and second mat elements.

11. The device of Claim 1 wherein the first and second mat elements have substantially identical lengths along which the flexible hinge formation establishes a hinged connection between the first and second mat elements, and the first and second mat elements are formed from polymer filaments that extend in random directions between intersections where the filaments are bonded.

12. The device of Claim 1 wherein one of the first and second mat elements has a pointed upper edge region configured to engage a selected one of the inner and outer wall structures when the device unfolds.

13. The device of Claim 12 wherein the pointed upper edge region forms an acute angle within the range of about 45 degrees to about 30 degrees.

14. The device of Claim 1 wherein the first mat element has a first pointed upper edge region configured to engage a selected one of the inner and outer wall structures when the device unfolds, and the second mat element has a second pointed upper edge region configured to engage the other of the inner and outer wall structures when the device unfolds.

15. The device of Claim 14 wherein each of the first and second pointed upper edge regions forms an acute angle within the range of about 45 degrees to about 30 degrees.

16. A mortar and debris collection device insertable into lower portions of a cavity defined between outer and inner wall structures of a masonry cavity wall to form an upwardly opening trough of generally V-shaped cross-section for catching mortar droppings and sizable construction debris at locations spaced from where weep vent passages formed through the outer wall structure open into lowermost portions of the cavity, comprising first and second relatively rigid mat elements coupled by a hinge connection that permits the relatively rigid mat elements to be pivoted about the hinge connection to a folded position wherein the mat elements closely overlies each other so as to be easily inserted into the lower portions of the cavity where portions of the first and second mat elements at positions spaced from the hinge connection engage opposed cavity-facing surface portions of the outer and inner wall structures to define an upwardly opening collection trough of substantially V-shaped cross-section that substantially bridges between the outer and inner wall structures for receiving and holding mortar droppings and construction debris at a central location spaced from the outer and inner wall structures and from where said weep vent passages open into said lowermost portions of the cavity, and wherein the mat elements permit moisture to pass therethrough as moisture migrates downwardly through the cavity and into the weep vent passage openings for discharge from the cavity through the weep vent passages.

17. The device of Claim 16 wherein at least one of the mat elements is defined by an open-space defining array of polymer filaments that twist and turn between filament intersections where adjacent ones of the filaments are bonded to each other.

18. The device of Claim 16 wherein each of the first and second mat elements has an open-space defining array of polymer filaments that twist and turn between filament intersections where adjacent ones of the filaments are bonded to each other.

19. The device of Claim 16 wherein:

a) the first mat element has a first length and a first width measured transversely with respect to the first length, and has a first edge region of the first mat element that extends along the first length;

b) the second mat element has a second length and a second width measured transversely with respect to the second length, and has a second edge region of the second mat element that extends along the second length; and,

c) the hinge connection extends along the first and second lengths to hingedly connect at least selected portions of the first edge region to at least selected portions of the second edge region.

20. The device of Claim 19 wherein the first and second widths are substantially equal.

21. The device of Claim 19 wherein the first and second widths are unequal.

22. The device of Claim 21 wherein one of the first and second widths is substantially twice that of the other of the first and second widths.

23. The device of Claim 21 wherein one of the first and second widths is substantially three times that of the other of the first and second widths.

24. The device of Claim 16 wherein a selected one of the first and second mat elements has a width sufficient to shield a reach of flashing material that lines a lower portion of the inner wall structure, and the selected one of the first and second mat elements is positioned in the cavity so as to shield said reach of flashing material.

25. The device of Claim 16 wherein the hinge formation extends substantially continuously along side-by-side extending lengths of the first and second mat elements.

26. The device of Claim 16 wherein the hinge formation extends along spaced portions of the lengths of the first and second mat elements.

27. The device of Claim 16 wherein the first and second mat elements have substantially identical lengths along which the flexible hinge formation establishes a hinged connection between the first and second mat elements, and the first and second mat elements are formed from polymer filaments that extend in random directions between intersections where the filaments are bonded.

28. The device of Claim 16 wherein one of the first and second mat elements has a pointed upper edge region configured to engage a selected one of the inner and outer wall structures when the device unfolds.

29. The device of Claim 28 wherein the pointed upper edge region forms an acute angle within the range of about 45 degrees to about 30 degrees.

30. The device of Claim 16 wherein the first mat element has a first pointed upper edge region configured to engage a selected one of the inner and outer wall structures when the device unfolds, and the second mat element has a second pointed upper edge region configured to engage the other of the inner and outer wall structures when the device unfolds.

31. The device of Claim 30 wherein each of the first and second pointed upper edge regions forms an acute angle within the range of about 45 degrees to about 30 degrees.

32. A mortar and debris collection device for use in lower portions of a cavity defined between an outer wall structure and an inner wall structure of a masonry cavity wall to define an upwardly opening trough of generally V-shaped cross-section for catching mortar droppings and sizable construction debris at a central location spaced from where weep vent passages formed through lowermost portions of the outer wall structure open into the cavity, wherein the cavity has a width measured between opposed cavity-facing surfaces of the outer and inner wall structures, comprising:

a) a first reach of relatively rigid mat formed from a first set of polymeric filaments that are spaced from each other along a majority of their lengths and that are connected at intersections thereof so as to define a first open-space mat having a relatively long first length and having a first transverse cross-section that is bordered by opposed first edges that are defined by selected portions of the first set of filaments, and by opposed first sides that are defined by other portions of the first set of filaments, with a majority of said other portions of the first set of filaments extending in one or

the other of a pair of substantially parallel-extending first planes so as to give the first mat a substantially uniform first thickness except where a first pointed upper edge region is defined;

b) a second reach of relatively rigid mat formed from a second set of polymeric filaments that are spaced from each other along a majority of their lengths and that are connected at intersections thereof so as to define a second open-space mat having a relatively long second length and having a second transverse cross-section that is bordered by opposed second edges that are defined by selected portions of the second set of filaments, and by opposed second sides that are defined by other portions of the second set of filaments, with a majority of said other portions of the second set of filaments extending in one or the other of a pair of substantially parallel-extending second planes so as to give the second mat a substantially uniform second thickness except where a second pointed upper edge region is defined;

c) with the first mat thickness and the second mat thickness, when added together, totalling less than eighty percent of the width of the cavity of the masonry wall;

d) with the first open-space mat having a first bottom edge portion extending along one of the first edges that is flexibly connected by at least one hinge formation to a second bottom edge portion of the second open-space mat that extends along one of the second edges for permitting relative movement of the first and second mats about the hinge formation between a substantially flat orientation wherein the first and second mats extend side-by-side substantially in a common plane, and a folded orientation wherein the first and second mats overlies each other to permit the device to be easily inserted into lower portions of the cavity in a hinge-connection-down

orientation, with the first and second pointed upper edge regions of the inserted device being configured to extend into engagement with the opposed cavity-facing surfaces of the outer and inner wall structures at locations spaced from the hinge connection so as to give the inserted device a substantially V-shaped cross-section that bridges between the opposed cavity-facing surfaces of the outer and inner wall structures.

33. The device of Claim 32 wherein the filaments of at least one of the first and second sets of filaments twist and turn randomly as they extend among intersections that are randomly located.

34. The device of Claim 32 wherein the filaments of at least one of the first and second sets of filaments are comprised of extruded polymer that is heat bonded to connect the filaments at said intersections.

35. The device of Claim 34 wherein the polymer is selected from among a group consisting of polyolefins, polyamides and polyvinyl chlorides.

36. The device of Claim 32 wherein the filaments of the first and second open-space mats are treated with at least one of an anti-microbial agent and an anti-fungal agent.

37. The device of Claim 32 wherein the first mat has a first width measured between the opposed first edges thereof, the second mat has a second width measured between the opposed second edges thereof, and the first width is substantially equal to the second width.

38. The device of Claim 32 wherein the first mat has a first width measured between the opposed first edges thereof, the second mat has a second width measured between the opposed second edges thereof, and the first width is unequal to the second width.

39. The device of Claim 32 wherein a selected one of the first and second mats has a width sufficient to shield a reach of flashing material that lines a lower portion of the inner wall structure, and the selected one of the first and second mats is positioned in the cavity so as to shield said reach of flashing material.

40. The device of Claim 32 wherein the hinge formation extends substantially continuously along side-by-side extending lengths of the first and second mats.

41. The device of Claim 32 wherein the hinge formation extends along spaced portions of the lengths of the first and second mats.

42. A mortar and debris collection device having polymer filaments that define substantially rigid, substantially flat, first and second mat elements, and having a flexible hinge formation extending between and connecting the first and second mat elements for movement relative to each other about the flexible hinge formation to a folded position wherein the first and second mat elements closely overlies each other so as to permit the device, with the first and second mat elements in the folded position, to be inserted into lower portions of a cavity between outer and inner wall structures of a masonry cavity wall in a hinge-formation-down orientation, with the first and second mat structures of the inserted device cooperating to define an upwardly opening trough of sub-

stantially V-shaped cross section that bridges between opposed cavity-facing surface portions of the outer and inner wall structures to catch mortar droppings and sizable construction debris at locations spaced from where weep vent passages formed through the outer wall structure open into lowermost portions of the cavity, and with the first and second mat elements each having at least a portion thereof defined by polymer filaments that twist and turn between junctures where adjacent filaments are connected so as to define open-space structures through which moisture can pass on its way toward the weep vent passage openings.